

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 762 789 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
15.09.1999 Bulletin 1999/37

(51) Int Cl.⁶: H04Q 7/24, H04Q 7/38

(43) Date of publication A2:
12.03.1997 Bulletin 1997/11

(21) Application number: 96305930.8

(22) Date of filing: 14.08.1996

(84) Designated Contracting States:
CH DE FR GB LI

(30) Priority: 22.08.1995 US 517938

(71) Applicant: AT&T IPM Corp.
Coral Gables, Florida 33134 (US)

(72) Inventors:
• La Porta, Thomas F.
Thornwood, New York 10594 (US)

• Veeraraghavan, Malathi
Atlantic Highlands, New Jersey 07716 (US)
• Ramjee, Ramachandran
Amherst, Massachusetts 01002, (US)

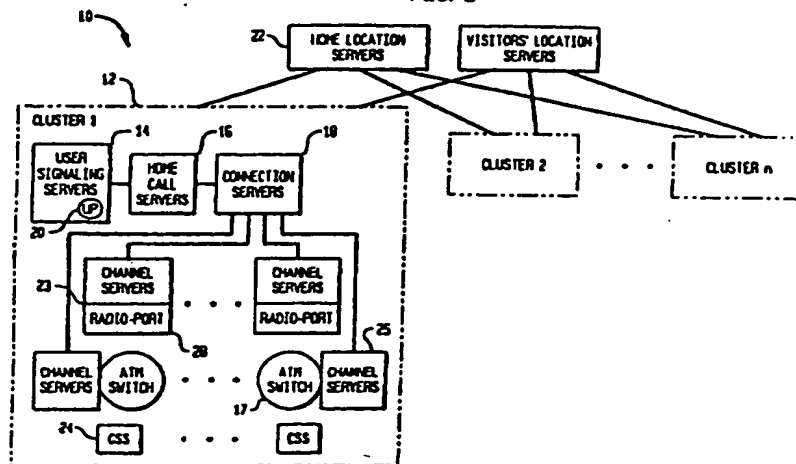
(74) Representative:
Watts, Christopher Malcolm Kelway, Dr. et al
Lucent Technologies (UK) Ltd,
5 Mornington Road
Woodford Green Essex, IG8 0TU (GB)

(54) Based migrating user agents for personal communication services

(57) The present invention is a user process that resides in network nodes to act as an agent for the mobile terminals in PCS environments. The user process handles all negotiation and complex signaling functions for the user, thus reducing the amount of signaling traffic that must travel over the valuable air interface. To achieve low call establishment times the user process is migrated as users move. Three embodiments of mechanisms for migrating the user process are disclosed. The NAIVE approach enables the amount of data

to size to be transferred to be optimized, leading to low overhead. This approach also provides flexibility when migrating across heterogeneous environments. A second alternative, termed the TERN approach, is promising for cases when the program is compute intensive and asynchronous migration is essential. The last approach considered, Condor, provides high reliability in the form of checkpointing, but incurs a high migration delay and has high memory requirements for the network processors.

FIG. 1



EP 0 762 789 A3

European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 30 5930

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	LA PORTA T F: "DISTRIBUTED CALL PROCESSING FOR PERSONAL COMMUNICATIONS SERVICES" IEEE COMMUNICATIONS MAGAZINE, vol. 33, no. 6, 1 June 1995 (1995-06-01), pages 66-75, XP000545327 ISSN: 0163-6804	1-5, 8, 17-19	H04Q7/24 H04Q7/38
A	* page 69, left-hand column, line 29 - page 73, left-hand column, line 61 *	6, 7, 13, 22	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04Q
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 27 July 1999	Examiner Palencia, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 (03/92) (P04001)